Pseudoangiomatous Stromal Hyperplasia

Nefertiti A. Brown, MD
SUNY Downstate Medical Center
Department of Surgery
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55yo postmenopausal female

- Routine MXR showed microcalcifications in the 11 o'clock position of the right breast
- Asymptomatic
- No risk factors for breast cancer

**PMH:** HTN, Fibrocystic disease  
**PSH:** Left breast mass excision via needle localization  
**Meds:** HCTZ  
**ALL:** NKDA  
**SH:** no tobacco, alcohol or IVDU

**PE:**
- 98F, 72, 16, 130/74  
  Breast: No palpable masses, skin changes, nipple discharge or axillary LAD bilaterally

**Plan:** OR for excisional biopsy via needle localization

**PATH:** 1x1x0.8cm mass  
- *Pseudoangiomatous stromal hyperplasia (PASH).*  
- Fibrocystic changes (sclerosing adenosis and stromal fibrosis)  
- Microcalcifications seen in benign ducts.  
- Margins of resection unremarkable.
Definition

• Localized overgrowth of mammary fibroblasts and myofibroblasts that occurs almost exclusively in premenopausal women as a painless, palpable intramammary mass

• Clinicopathologic spectrum
  - extending from focal minor microscopic changes to cases in which it produces breast lumps

• Etiology is unknown
Pathogenesis

- Premenopausal women
- Gynecomastia
- Can occur as:
  - an isolated mass or may coexist with any breast lesion
  - unilateral

- Responsiveness of mammary myofibroblasts → Stromal hyperplasia
- Hormonally mediated
- Progesterone (PR)
  - PR receptors expressed by myofibroblast nuclei
Presentation

- Slow growing breast mass
  - Firm, solitary
  - Painless, mobile

- DDx: Fibroadenoma, low-grade angiosarcoma, myofibroblastoma, and mammary hamartoma.
Diagnosis

Mammography

- Well-circumscribed soft tissue mass without calcification
- No obvious regions of fat density

Ultrasound

- Solid, well-defined, hypoechoic mass
Diagnosis

• Fine-needle aspiration nor Cytology helpful

• Image guided core biopsy
  - 83% sensitive
Pathology

Gross

• Well-circumscribed
• Smooth
• Rubbery
• +/- capsule

Homogenous, solid lesion
Microscopically

- Dense fibrous stroma
- Complex channels
  - Irregular, empty, open, or slit-shaped
- Cells are discontinuous, flat, and without nuclear atypia

- Immunohistochemical analysis reveals a stroma that is uniformly positive for the CD34 antibody.
Clinical Implications

Breast mass -> Core Biopsy

PASH

Indeterminate

Observation:
- enlarging
- Complete local excision
Conclusions

- Hyperplasia of the mammary stroma
- Possible hormonal etiology
- Spectrum of disease
- Increased awareness
  - can coexist with malignancy
- Benign
- Does not increase the risk of Breast CA
Question 1

PASH occurs because

A) Hyperplasia of fat
B) Overexpression of androgen receptors
C) Hyperplasia of glands
D) Hyperplasia of myofibroblasts and fibroblasts
Question 2

The best way to diagnose PASH is

A) FNA
B) Core needle biopsy
C) Complete excision
D) X-ray vision
PASH

A) Mimics other benign diseases
B) Mimics cancer
C) Requires mastectomy if diffuse
D) All of the above
E) None of the above
PASH is

A) Malignant
B) Benign
C) A rock band
References